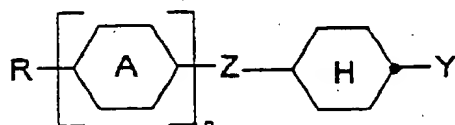



Patent Claims

SUB  
B1

1. Liquid-crystalline medium based on a mixture of polar compounds of positive dielectric anisotropy, characterized in that it comprises one or more compounds of general formula I



in which

R is H, an alkyl or alkenyl radical having 1 to 15 carbon atoms which is unsubstituted, monosubstituted by CN or CF<sub>3</sub> or at least monosubstituted by halogen, where one or more CH<sub>2</sub> groups in these radicals may also, in each case independently of one another, be replaced by -O-, -S-, , -CO-, -CO-O-, -O-CO- or -O-CO-O- in such a way that O atoms are not linked directly to one another,



is a trans-1,4-cyclohexylene ring, in which, in addition, one or two CH<sub>2</sub> groups may be replaced by -O- and/or -S-, or a cyclohexenylene ring,

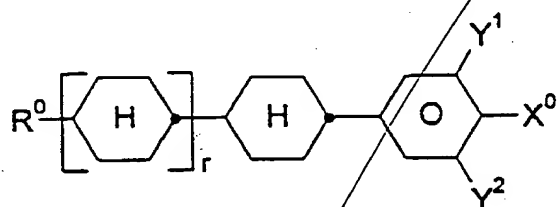
Y is halogenated alkyl, halogenated alkenyl, halogenated alkoxy or halogenated alkenyloxy having up to 6 carbon atoms,

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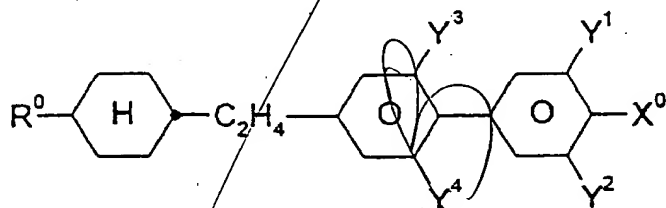
Z is  $-\text{CH}_2\text{O}-$ ,  $-\text{OCH}_2-$ ,  $-\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}=\text{CH}-$ ,  
 $-\text{CF}_2\text{O}-$ ,  $-\text{OCF}_2-$ ,  $-\text{C}_2\text{F}_4-$  or a single bond,  
 and

n is 1 or 2.

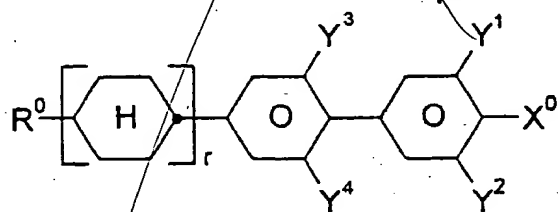
2. Medium according to Claim 1, characterized in that  
 it additionally comprises one or more compounds  
 selected from the group consisting of the general  
 formulae II to VIII:



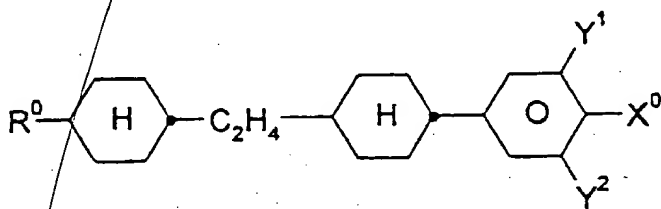
II



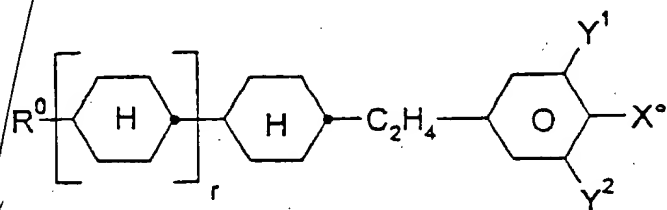
III



IV

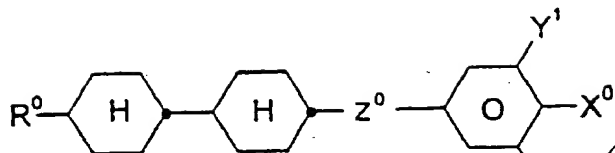


V

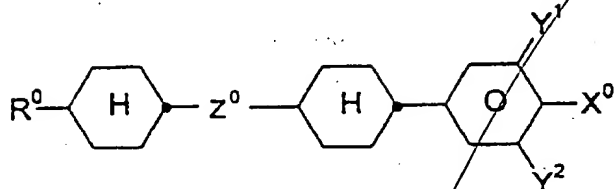


VI

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VII



VIII

in which the individual radicals have the following meanings:

$R^0$ : n-alkyl, oxaalkyl, fluoroalkyl or alkenyl, in each case having up to 7 carbon atoms;

$X^0$ : F, Cl, halogenated alkyl, alkenyl or alkoxy having 1 to 6 carbon atoms;

$Z^0$ :  $-C_2H_5-$ ,  $-CF_2O-$ ,  $-OCF_2-$ ,  $-C_2F_4-$ ,  $-CH_2O-$ ,  $-OCH_2-$  or  $COO-$ ;

$Y^1$ ,  $Y^2$ ,  $Y^3$  and  $Y^4$ : each, independently of one another, H or F

$r$ : 0 or 1.

3. Medium according to Claim 2, characterized in that the proportion of compounds of the formulae I to VIII in the mixture as a whole is at least 50% by weight.

4. Medium according to Claim 1 or 2, characterized in that the proportion of compounds of the formula I

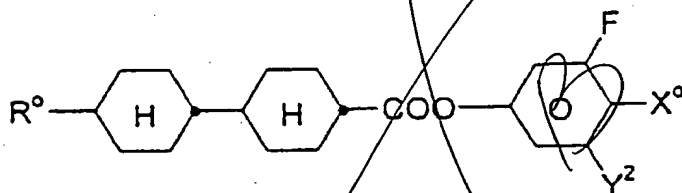
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SUB  
30

in the mixture as a whole is from 5 to 50% by weight.

5. Medium according to at least one of Claims 2 to 3, characterized in that the proportion of compounds of the formulae II to VIII in the mixture as a whole is from 20 to 80% by weight.

6. Medium, according to Claim 1, characterized in that it additionally comprises one or more compounds of the formula



in which  $R^0$ ,  $X^0$  and  $Y^2$  are as defined in Claim 2.

7. Medium according to Claim 2 or Claim 6, characterized in that  $X^0$  is F or  $OCF_3$ , and  $Y^2$  is H or F.

8. Medium according to one of Claims 1 to 7, characterized in that in the compound of the formula I, Y is  $OCF_3$  or  $CF_3$ .

9. Medium according to one of Claims 1 to 8, characterized in that the compound of the formula I is selected from the group consisting of the compounds Ia to In:

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1a

**ib**

1c

Id

le

**If**

ig

# lh

- ii

lj

Ik

11

Im

In

in which R is as defined in Claim 1.

- 5
- X 10. Use of the liquid-crystalline medium according to Claim 1 for electro-optical purposes.
- ✓ 11. Electro-optical liquid-crystal display containing a liquid-crystalline medium according to Claim 1.

Add  
B2

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